

PRODUCED BY THE UNITED STATES GEOLOGICAL SURVEY  
CONTRIBUTOR BY AERIAL PHOTOGRAPHS TAKEN 1960  
FIELD CHECKED 1960 MAP EDITED 1960  
PROJECTION LAMBERT CONFORMAL CONIC  
GRID 100-METER UNIVERSAL TRANSVERSE MERCATOR ZONE 12  
NAD 83 STATE GRID TICS UTAM CENTRAL ZONE  
UTM GRID DECLINATION 17° 10' EAST  
1960 MAGNETIC NORTH DECLINATION 13° EAST  
AERIAL DATUM NATIONAL GEODETIC VERTICAL DATUM OF 1929  
HORIZONTAL DATUM 1927 NORTH AMERICAN DATUM  
To place on the predicted North American Datum of 1983,  
move the projection lines as shown by dashed corner ticks  
(1 meter north and 59 meters east)  
There may be private inholdings within the boundaries of any  
Federal and State Reservations shown on this map  
Where omitted, land lines have not been established or are  
not shown because of insufficient data  
All marginal data and lettering generated and positioned by  
automated type placement procedures

PROVISIONAL MAP  
Produced from original  
manuscript drawings. Infor-  
mation shown as of date of  
field check.

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS  
FOR SALE BY U.S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225  
OR RESTON, VIRGINIA 22092

1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8

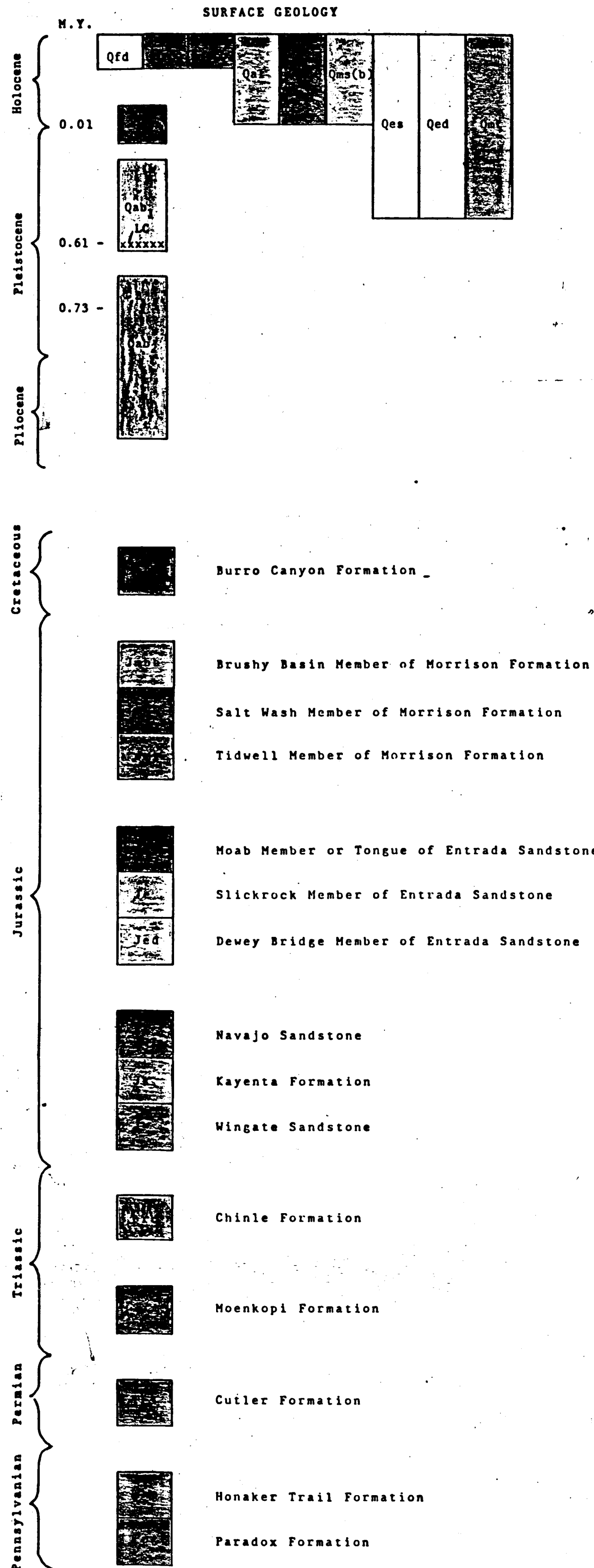
ADJOINING 7.5' QUADRANGLE NAMES

ROAD LEGEND  
Improved Road  
Unimproved Road  
Trail  
Interstate Route U.S. Route State Route  
Michael J. Goydas  
1989  
FISHER VALLEY, UTAH  
PROVISIONAL EDITION 1985  
38104-F2-TT-024



FORMATION	SYMBOL	THICKNESS feet (meters)	LITHOLOGY
Unconsolidated deposits	Q	0-508 (0-155)	
Burro Canyon	Kbc	56 (17)	
MORRISON FORMATION	Jmbb	408 (124)	
	Jmsw	252 (77)	
ENTRADA SANDSTONE	Jmt	111 (34)	
	Jem	38 (12)	
	Je	254 (77)	
	Jed	49 (15)	
Navajo Sandstone	Jn	264 (80)	
Kayenta Formation	Jk	217 (66)	
Wingate Sandstone	Jw	315 (96)	
Chinle Formation	Jc	294 (90)	
Moenkopi Formation	Jm	514 (157)	
Cutler Formation	Pc	3048 (929)	
Paradox Formation	IPpg	150 (46)	

# CORRELATION OF MAP UNITS



## SYMBOLS

CONTACT  
Dashed where approximate

NORMAL FAULT  
Dashed where location inferred; dotted where covered;  
bar and ball on downthrown side

6000  
STRUCTURAL CONTOUR  
Contour interval 200 feet  
Drawn on top of Wingate Sandstone  
Datum is mean sea level

TRACE OF AXIAL SURFACE OF FOLD  
Anticline  
Syncline

STRIKE AND DIP OF BEDDING  
Inclined

STRIKE AND DIP OF JOINTING  
80

## OTHER SYMBOLS

Dry Hole

# DESCRIPTION OF MAP UNITS

## Surface Geology

Qfd	Man-made fill- Mine dump debris, restricted to Polar Mesa
Qmt(w)	Talus deposits-Mostly rockfall boulders and smaller angular fragments of Wingate material lying on Chinle and Moenkopi slopes.
Qmt(b)	Talus deposits-Mostly rockfall boulders of Brushy Basin material lying on Salt Wash and Tidwell slopes and Navajo bench.
Qal	Alluvium-Thickly to thinly bedded, fine to coarse sand, and minor subangular to subround gravel mixed with varying amounts of colluvial and eolian deposits (2-25 ft thick).
Qac	Colluvium-Angular, poorly sorted slope deposits mixed with varying amounts of alluvial and eolian deposits.
Qms(b)	Landslide deposit-Poorly sorted debris deposited by mass movement on slopes. Primarily involves Brushy Basin material.
Qmt	Talus deposit-Rockfall blocks, boulders, and smaller angular fragments lying on slope immediately below the parent outcrop. Mapped only where 90% of underlying unit is covered.
Qas	Alluvial sand-Thickly to thinly bedded, silt and fine to coarse sand, contains laminated beds with carbonaceous debris.
Qes	Eolian sand sheet deposit-Unstratified, non-indurated fine sand and coarse silt. Mantles floor of Fisher Valley and caps dipslopes (1-30 ft thick).
Qed	Eolian sand dune deposit-Unstratified, non-indurated fine sand in dune morphology. Restricted to the edge of bluffs near Onion Creek.
Qab1	Upper basin-fill deposit-Massive to medium-bedded, moderately indurated sand, minor lenses of fine to medium, matrix- and clast-supported subangular to subround gravel. Unit contains considerable cross-bedded fluvial sand and gravel and massive eolian sand. Angular unconformity separates upper and lower basin-fill units. Lava Creek ash occurs locally at the base of the unit.
LC xxxxxxx	Lava Creek Ash-Very light gray to white ash fall deposit as much as 3.5 ft thick, 0.61 m.y. old (Izett, 1981).
Qab2	Lower basin-fill deposit-Thickly to thinly bedded, fine to coarse sand, strongly indurated. Toward edges of basin unit is composed predominantly of subround matrix-supported gravel. Unit contains at least three buried soils, the Bishop ash, and several angular unconformities.
/B .....	Bishop Ash-White to reddish-gray ash fall and flow deposit. Basal part of unit is massive ash fall deposit, upper part of unit consists of thinly cross-bedded ash flow deposit. Occurs locally about 85 ft below the top of lower basin-fill unit (Qab1) as much as 5.5 ft thick, 0.73 m.y. old (Izett, 1981).
Kbc	Burro Canyon Formation-Pale yellowish-orange to greenish-gray, cliff-forming, cross-bedded, fine-grained quartzose sandstone.
Jmbb	Brushy Basin Member of Morrison Formation-Purple reddish-gray variegated slope-forming mudstone and muddy siltstone with thin ledges of sandstone and conglomeratic sandstone containing varicolored chert.
Jmsw	Salt Wash Member of Morrison Formation-Very light gray to grayish-pink, ledge forming, very fine- to medium-grained, cross-bedded lenticular sandstone interbedded with moderate reddish-brown slope-forming mudstone and siltstone.
Jmt	Tidwell Member of Morrison Formation-Moderate reddish-brown to light gray slope forming silty mudstone interbedded with light yellowish-gray slope-forming fine-grained sandstone and light gray ledge-forming limestone.
Jem	Moab Member or Tongue-Very light gray, rounded cliff-forming, medium-grained quartzose sandstone.
Je	Slickrock Member of Morrison Formation-Reddish-orange to light yellowish gray, rounded cliff-forming fine-grained, cross-bedded quartzose sandstone, massive often covered with self-derived Holocene sand.
Jed	Dewey Bridge Member of Morrison Formation-Moderate reddish-orange, slope-forming, horizontally bedded fine-grained sandstone with local light gray limestone beds. Exhibits contorted bedding which affects the lower part of the Slickrock Member above. Formerly known as Carmel Formation (0-49 ft thick).
Jn	Navajo Sandstone-Yellowish-gray, cliff-forming fine- to medium-grained, cross-bedded eolian quartzose sandstones. Forms domes and rounded knolls on Kayenta Dipslopes. Contains local thin, hard, gray chert bearing limestone beds.
Jk	Kayenta Formation-Grayish-red ledge-forming fine- to medium-grained, irregularly bedded sandstone with subordinate intraformational conglomerate and siltstone units. Forms thick step like ledges between the more massive Navajo and Wingate Formations.
Jw	Wingate Sandstone-Moderate reddish-orange, massive cliff-forming, fine-grained, very well-sorted cross-bedded eolian quartz sandstone.
Jc	Chinle Formation-Moderate reddish orange, slope-forming, very fine-grained sandstone to siltstone with a basal gray discontinuous limestone bed. Exhibits local angular unconformities (294-315 ft thick).
Jm	Moenkopi Formation-Brown, slope-forming thinly laminated siltstone, very fine- to fine-grained sandstone and minor conglomerate lenses. Sandstones are ripple-marked. Exhibits local angular unconformities (510-555 ft thick).
Pc	Cutler Formation-Pale reddish-purple, fine- to medium-grained arkosic sandstone and pale reddish-brown granule- to cobble-conglomerate. Exhibits local angular unconformities.
IPhp	Honaker Trail Formation-Not exposed in Fisher Valley
IPpg	Paradox Formation-Mostly light gray contorted gypsum with interbeds of black silty shale, light brownish-gray sandstone and limestone.

